A List of the Butterflies of Haeterinae and Biinae (Lepidoptera: Satyridae) Collected by two Japanese Expeditions in Colombia and Perú, South America

Mayumi TAKAHASHI

11–13, Kita-andô 5 chôme, Shizuoka-shi, Shizuoka 420

In the present paper, the author is going to give a list of the Haeterinae and Biinae collected by the First Scientific Expedition of Shizuoka University to the Colombian Andes 1967, and "La Expedición Japonesa a las Zonas Amazónicas 1973", together with some new data on their distribution. Besides these, several butterflies collected by Dr. Leopoldo RICHTER in the area along the Cotuhé River, Amazonas, Colombia, will also be dealt with. A discussion will be made on the geographical variation of *Pierella hortona* HEWITSON in southern Colombia. The specimens collected by the Expedition 1967 are preserved in the Fuculty of Science, Shizuoka University, and the others are in the author's private collection.

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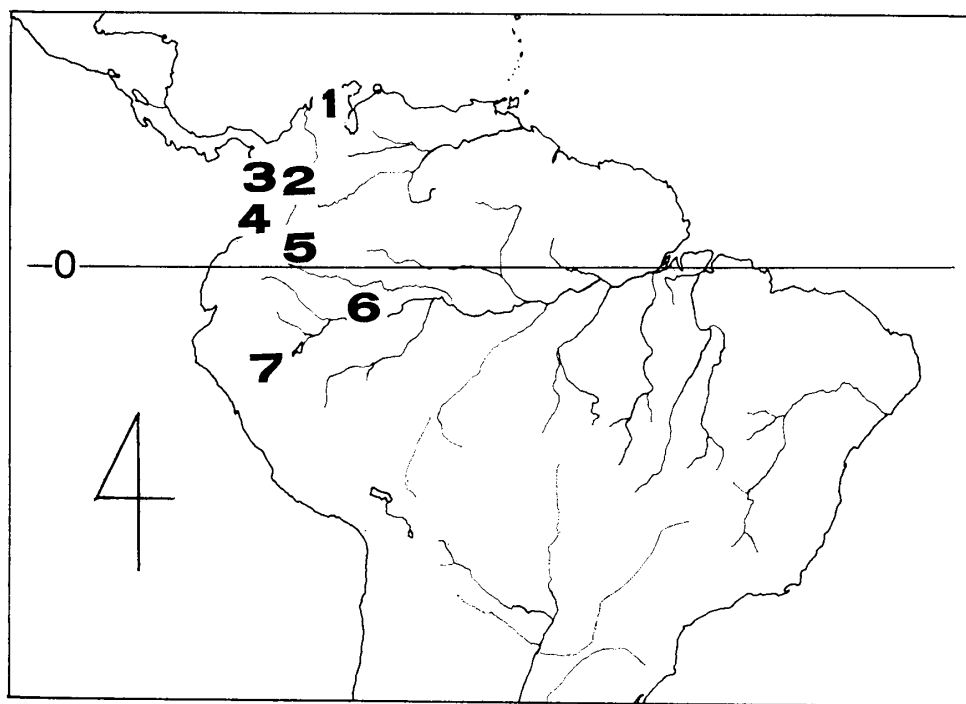


Fig. 1. Localities: 1, Sierra Nevada de Santa Marta (Colombia); 2, La Pintada (Colombia); 3, La Troje (Colombia); 4, Vicinities of Buenaventura (Colombia); 5, San José (Colombia); 6, Leticia and Río Cotuhé (Colombia); 7, Tingo María (Perú).

to Prof. Takashi SHIRÔZU and Mr. Osamu YATA, of the Kyushu University, Fukuoka, and Dr. Yoshihiko KUROSAWA, of the National Science Museum (Nat. Hist.), Tokyo, who gave convenience of investigating literature. Many thanks are also due to Dr. Leopoldo RICHTER and Ernesto W. SCHMIDT-MUMM, Bogotá, Colombia, who offered kind aid to the author during the Expedition 1973.

Localities

1. Sierra Nevada de Santa Marta (Magdalena, northern Colombia)

The author collected *Pierella luna luna* along the Piedras River (450 m) and near El Mico (900 m). These localities lie at the northwestern foot of the Sierra Nevada de Santa Marta. Three females were collected in thick forests. From this massif, haeterine butterflies have never been reported.

2. La Pintada, Río Cauca (Antioquia, northern Colombia)

This area is mostly occupied by pastures and retains some forests only in very limited places. A male and a female of *Pierella luna luna* were collected in a thick forest.

3. La Troje, west of the Cordillera Oriental (Chocó, northwestern Colombia)

This area is known to be the most pluvial one in South America, with over 8,000 mm of precipitation. Only one species, *Cithaerias pireta menander* was found in a thick forest. From this area, haeterine butterflies have never been reported until now.

4. Vicinities of Buenaventura, west of the Cordillera Occidental (Valle, northern Colombia)

The author collected *Cithaerias pireta menander* and *Pierella luna lesbia* in this area. In the vicinities of Zabaletas, along the Dagua River, tropical rain forests are well developed and abundantly harbour these haeterine butterflies. Here, the author saw a haeterine butterfly, probably *Pierella incanescens hymettia*, with red patches on the hindwing upperside.

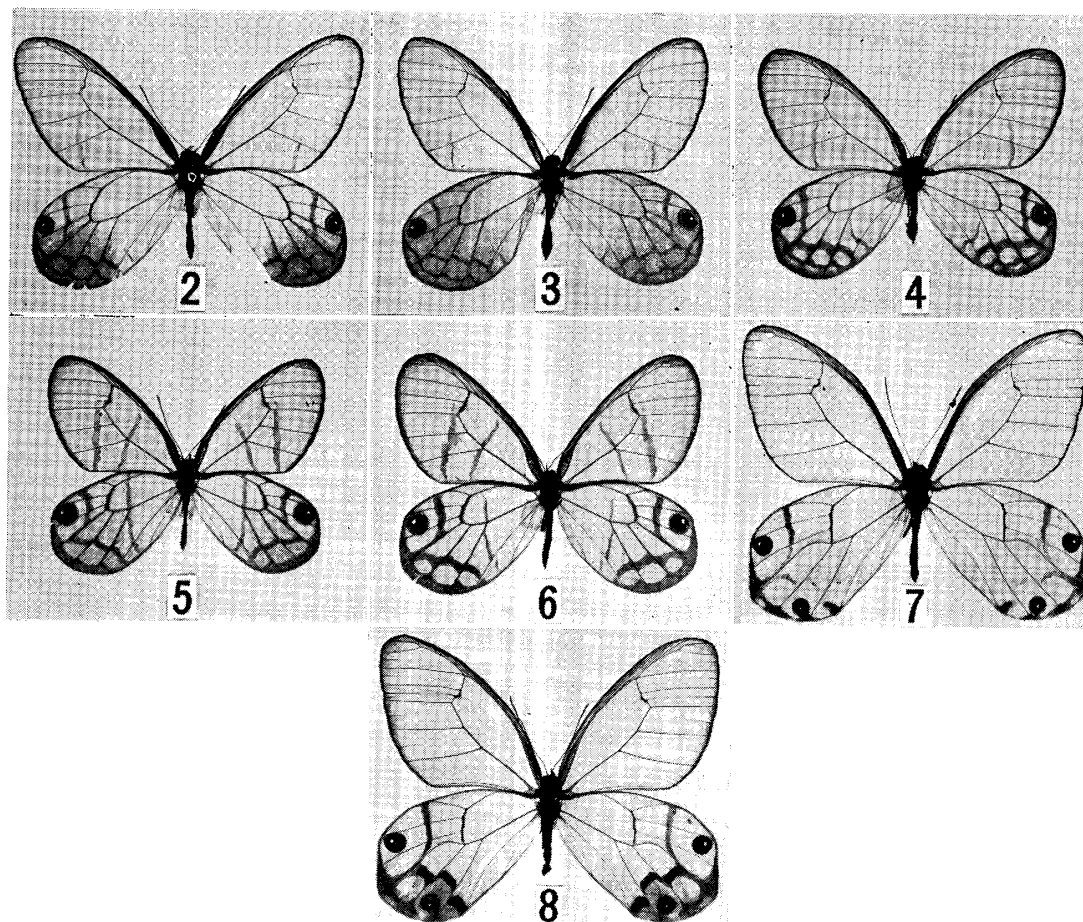
5. San José, southeastern foot of the Cordillera Oriental (Caquetá, south-central Colombia)

A rich fauna of haeterine butterflies was seen in the tropical rain forest. The author collected six species of the Haeteriinae (*Cithaerias phantoma*, *Haetera piera negra*, *Pierella lamia columbina*, *P. lena glaucolena*, *P. lucia* and *P. hortona*) and one species of the Biinae (*Antirrhaea philoctetes*). The haeterine butterflies were observed flying near the ground and resting on leaves or the ground with their wings half opened. These satyrid butterflies have never been reported from this area.

6. Leticia and Río Contuhé, southern limit of Colombia (Amazonas, Colombia)

In the area, six species of the Haeterinae (*Cithaerias aurorina*, *Pierella amalia*, *P. lamia columbina*, *P. hyalina dracontis*, *P. lucia* and *P. hortona*) were collected in tropical rain forests. The author found four of the six in the thick forest of Leticia, where was scanty undergrowths.

7. Tingo María, along the Huallaga River (Huánuco, Perú)

Pierella lamia columbina (Haeteriinae) and *Bia actorion* (Biinae) were collected in a tropical rain forest.

Figs. 2–8. Haeterinae: 2, *Cithaerias phantoma* FASSL ♂, San José, Aug. 27, 1973, MT (Mayumi TAKAHASHI) leg., FL (Forewing length) 31.8 mm; 3, *Cithaerias aurorina* (WEYMER) ♂, Río Cotuhé, Aug. 4–7, 1972, Leopoldo RICHTER leg., FL 29.8 mm; 4, do. ♀, same data, FL 28.9 mm; 5, *Cithaerias pireta menander* (DRURY) ♂, Zabaletas, vicinity of Buenaventura, Aug. 11, 1973, MT leg., FL 27.5 mm; 6, do. ♀, La Troje, Sept. 3, 1973, MT leg., FL 30.5 mm; 7, *Haetera piera* C. et R. FELDER ♂, San José, Aug. 26, 1973, MT leg., FL 36.1 mm; 8, do. ♀, same locality, Aug. 27, 1973, MT leg., FL 40.5 mm.

List and Collecting Data

Haeterinae

1. *Cithaerias phantoma* FASSL (Fig. 2).
   1 ♂, San José, Aug. 27, 1973, MT (Mayumi TAKAHASHI) leg.
2. *Cithaerias aurorina* (WEYMER) (Figs. 3, 4).
   2♂ 1♀, Río Cotuhé, Aug. 4–7, 1972, L. RICHTER leg.
3. *Cithaerias pireta menander* (DRURY) (Figs. 5, 6).
   1 ♀, La Troje, Sept. 3, 1973, MT leg.; 2 ♂, Zabaletas, Aug. 11, 1973, MT leg.; 1 ♂, near Bajo Calima, Aug. 12, 1973, MT leg.
4. *Haetera piera* C. et R. FELDER (Figs. 7, 8).
   1♂ 1♀, San José, Aug. 26, 1973, MT leg.; 2 ♂, San José, Aug. 27, 1973, MT leg.; 1 ♂, Leticia, Sept. 9, 1973, MT leg.

5a. *Pierella luna luna* (FABRICIUS) (Fig. 9).
2 ♀, Quebrada Constante, Río Piedras, Aug. 1, 1967, MT leg.; 1 ♀, near El Mico, Sept. 6, 1967, MT leg.; 1♂ 1♀, La Pintada, Aug. 30, 1973, MT leg.

5b. *Pierella luna lesbia* STAUDINGER (Figs. 10, 11).
1 ♀, Zabaletas, Aug. 11, 1973, MT leg.; 1 ♂, near Bajo Calima, Aug. 12, 1973, MT leg.

6. *Pierella lamia columbina* KRÜGER (Figs. 12, 13).
2♂ 2♀, San José, Aug. 26, 1973, MT leg.; 1♂ 1♀, San José, Aug. 27, 1973, MT leg.; 1♂ 1♀, Leticia, Sept. 9, 1973, MT leg.; 1♂ 1♀, Tingo María, July 24, 1973, MT leg.

7. *Pierella lena glaucolena* STAUDINGER (Figs. 14, 15, 30).
1 ♂, San José, Aug. 26, 1973, MT leg.; 3♂ 1♀, San José, Aug. 27, 1973, MT leg.

8. *Pierella amalia* WEYMER (Figs. 16, 17, 31).
1 ♂, Leticia, Sept. 8, 1973, MT leg.; 1 ♂, Leticia, Sept. 10, 1973, MT leg.; 1 ♂, Río Cotuhé, Aug. 4–7, 1972, L. RICHTER leg.

9. *Pierella hyalina dracontis* (HÜBNER) (Fig. 18).
1 ♂, Leticia, Sept. 9, 1973, MT leg.

10. *Pierella lucia* WEYMER (Fig. 19, 20).
2♂ 1♀, San José, Aug. 27, 1973, MT leg.; 1 ♂, near Leticia (Brasilian territory), Sept. 12, 1973, MT leg.; 1 ♂, Río Cotuhé, Aug. 4–7, 1972, L. RICHTER leg.

11. *Pierella hortona* HEWITSON (Figs. 21–25).
1♂ 1♀, San José, Aug. 27, 1973, MT leg.; 1 ♂, Río Cotuhé, 4–7, 1972, L. RICHTER leg.

Biinae

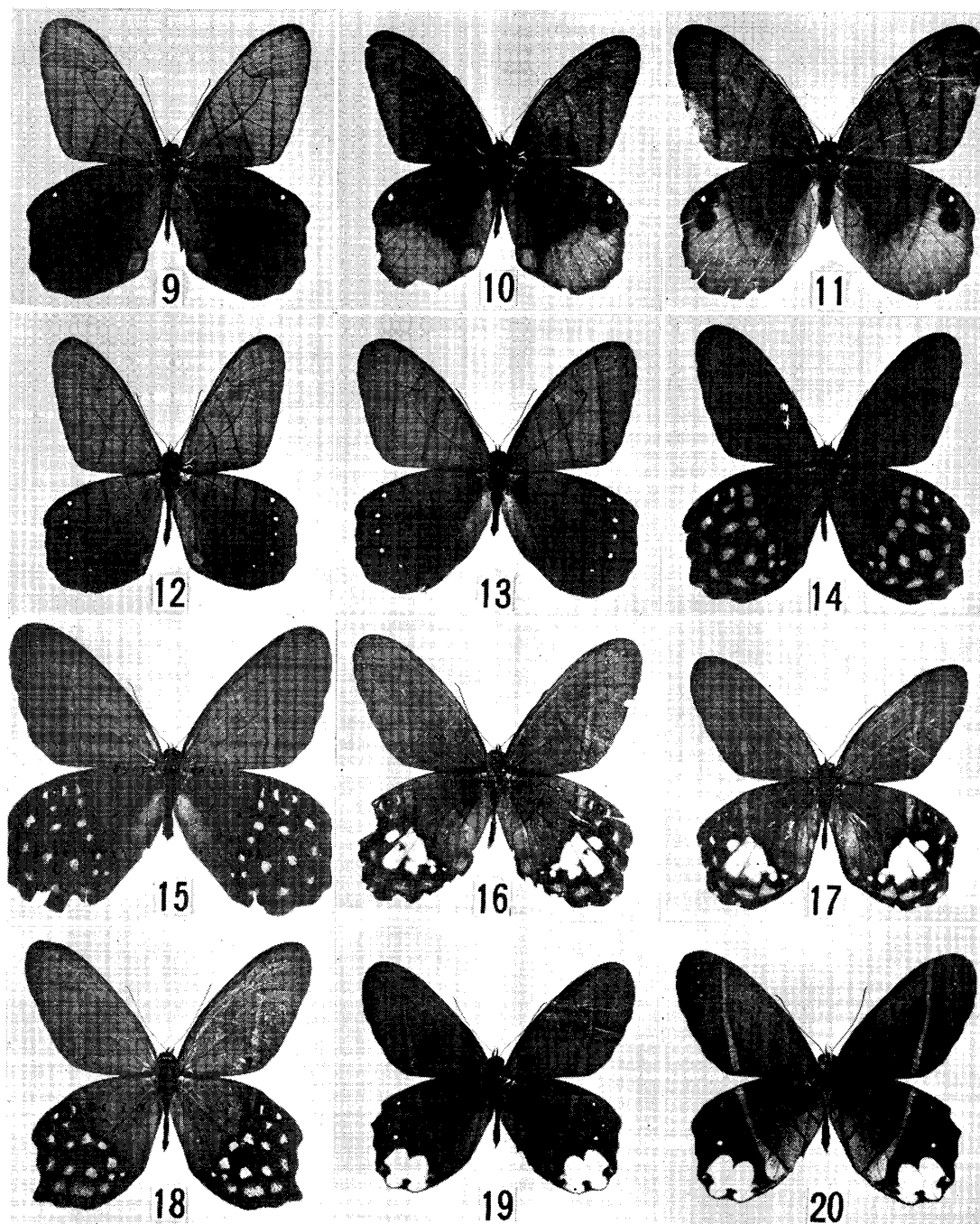
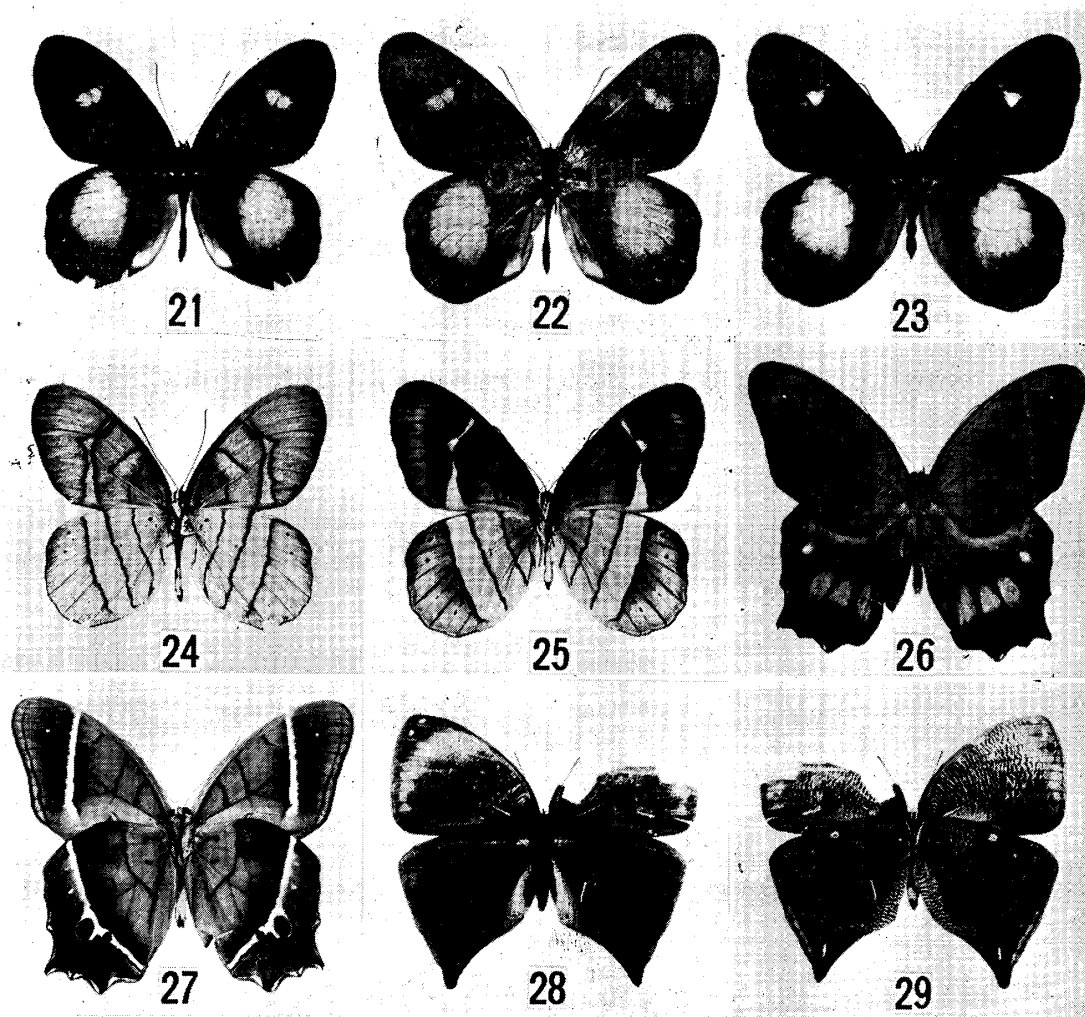
12. *Antirrhaea philoctetes* (LINNAEUS) (Figs. 26, 27).
1 ♂, San José, Aug. 27, 1973, MT leg.

13. *Bia actorion* (LINNAEUS) (Figs. 28, 29).
1 ♀, Tingo María, July 24, 1973, MT leg.

A Note on the Geographical Variation of *Pierella hortona* in Southern Colombia

In this report are recorded two males and one female of *Pierella hortona* HEWITSON, which were collected in San José and Río Cotuhé, southern Colombia. The wing pattern of these specimens are different from those of the two subspecies hitherto known, *P. hortona hortona* HEWITSON from Ecuador and *P. h. hortensia* C. et R. FELDER from Río Negro. The characteristics of the wing pattern shown by the present specimens are as follows:

Male, forewing length 31–32 mm, similar to typical *hortona*. Blue patch in the cell end of the forewing smaller, 6–7 mm in length and 3 mm in width (6–12 mm and 3–4 mm respectively in typical *hortona*), and not elliptic in shape as in *hortona*, but flattened at the distal margin. Blue patch in the hindwing similar to that of typical *hortona*, not so distant from the distal margin as in *hortensia*.

Female, forewing length 35–36 mm. Blue patch in the forewing relatively reduced,

Figs. 9–20. Haeterinae: 9, *Pierella luna luna* (Fabricius) ♂, La Pintada, Aug. 30, 1973, MT leg., FL 36.9 mm; 10, *Pierella luna lesbia* Staudinger ♂, near Bajo Calima, vicinity of Buenaventura, Aug. 12, 1973, MT leg., FL 37.4 mm; 11, do. ♂, Zabaletas, vicinity of Buenaventura, Aug. 11, 1973, MT leg., FL 40.4 mm; 12, *Pierella lamia columbina* Krüger ♂, San José, Aug. 27, 1973, MT leg., FL 33.4 mm; 13, do. ♀, same data, FL 39.0 mm; 14, *Pierella lena glaucolena* Staudinger ♂, San José, Aug. 27, 1973, MT leg., FL 39.5 mm; 15, do. ♀, same data, FL 41.3 mm; 16, *Pierella amalia* Weymer ♂, Leticia, Sept. 8, 1973, MT leg., FL 37.4 mm; 17, do. ♂, Río Cotuhé, Aug. 4–7, 1972, Leopoldo Richter leg., FL 34.0 mm; 18, *Pierella hyalina dracontis* (Hübner) ♂, Leticia, Sept. 9, 1973, MT leg., FL 34.5 mm; 19, *Pierella lucia* Weymer ♂, San José, Aug. 27, 1973, MT leg., FL 32.5 mm; 20, do., underside.

Figs. 21–29. Haeterinae and Biinae: 21, *Pierella hortona* HEWITSON ♂, San José, Aug. 27, 1973, MT leg., FL 32.8 mm; 22, do. ♂, Río Cotuhé, Aug. 4–7, 1972, L. RICHTER leg., FL 31.7 mm; 23, do. ♀, San José, Aug. 27, 1973, MT leg., FL 35.9 mm; 24, underside of 21; 25, underside of 23; 26, *Antirrhaea philoctetes* (LINNAEUS) ♂, San José, Aug. 27, 1973, MT leg., FL 42.1 mm; 27, do., underside; 28, *Bia actorion* (LINNAEUS) ♀, Tingo María, July 24, 1973, MT leg., FL 31.2 mm; 29, do., underside.

with a white spot in the centre. That in the hindwing also less developed. Wing underside darker coloured than in male, dark brown streaks and submarginal black spots of the hindwing well developed.

These specimens probably belong to a new subspecies. However, the author prefers to refrain from describing it because of the scarecity of materials.

要　　約

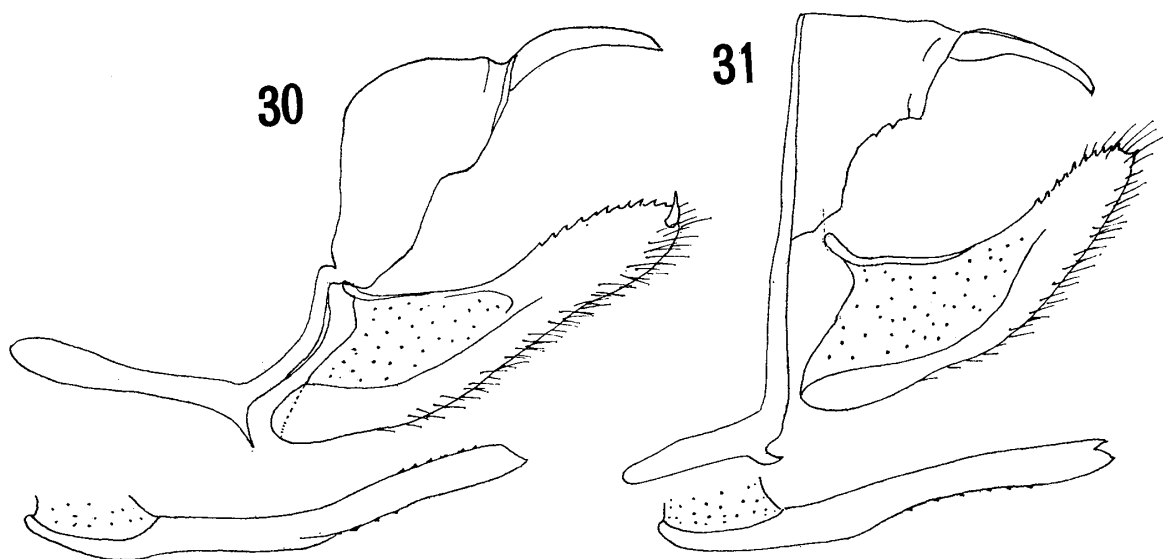
筆者は，“第1次静岡大学コロンビア・アンデス学術調査，1967” (静岡大学理学部・静岡大学山岳会)および“第1次奥アマゾン調査”(日本アンデス会議・共同通信社) に参加したが，そのときに採集したジャノメチョウ科のスカシジャノメ亜科 Haeterinae (11種) とオナガコノマチョウ亜科 Biinae (2種)の記録を報告する．この中には，コロンビア在住のレオポルド・リヒター博士 (Dr. L. RICHTER)

Figs. 30–31. Male genitalia: 30, *Pierella lena glaucolena* STAUDINGER (from San José); 31, *Pierella amalia* WEYMER (from Río Cotuhé).

Table 1. Collected number of the Haeterinae and Biinae in each locality (1–7), see Fig. 1.

Species	1	2	3	4	5	6	7	Total
Cithaerias phantoma					1			1
Cithaerias aurorina						3		3
Cithaerias pireta menander		1	3					4
Haetera piera negra					5			5
Pierella luna luna	3			2				5
Pierella luna lesbia			2					2
Pierella lamia columbina					6	2	2	10
Pierella lena glaucolena					5			5
Pierella amalia						3		3
Pierella hyalina dracontis						1		1
Pierella lucia					2	2		4
Pierella hortona					2	1		3
Ahtirrhaea philoctetes					1			1
Bia actorion							1	1
Total number of species	1	1	2	1	7	6	2	13
Total number of individuals	3	1	5	2	22	12	3	48

が 1972 年にコロンビア南端部のコトゥエ川 (Río Cotuhé) で採集された数頭の標本のデータも含まれている.

調査した場所は，ペルーのティンゴ・マリア (Tingo María) を除いては，いずれもコロンビア領に属し，コロンビア北部のサンタ・マルタ山地 (Sierra Nevada de Santa Marta)，大平洋岸のキブド市 (Quibdó) に近いラ・トゥロヘ (La Troje)，その南側のサバレタス (Zabaletas)，カリマ川の下流 (Bajo Calima) 付近などブエナヴェントゥーラ (Buenaventura) 市の周辺，カウカ川に沿うラ・ピンターダ (La Pintada)，東コルディエラ山脈 (Cordillera Oriental) の山麓の小都市フロレンシア (Florencia) に近いサン・ホセ (San José)，コロンビア南端部のアマゾン河に沿うレティシア (Leticia)，それにペ

ルーのウアジャガ川 (Río Huallaga) に沿うティンゴ・マリアである．これらのうち，すくなくとも，サンタ・マルタ山地，ラ・トゥロへ，サン・ホセなどのスカシジャノメ亜科とオナガコノマチョウ亜科に関しては，まだ発表されたことがないので，ここに発表されたこれらの地域に関するデータは，分布上の新知見といえよう．

上記の地域の中で，これらの蝶がもっとも豊富に見られたのは，サン・ホセ付近の熱帯降雨林である．このサン・ホセというところは，ちょうどアンデスの一部・東コルディエラ山脈がアマゾンの大平原と接する位置にあり，大部分は牧場になっているが，ところどころに残されている熱帯降雨林には，おどろくほどのスカシジャノメ亜科の蝶が見られることがある．ここでは 1973 年 8 月 26 日から 27 日かけて，計 6 種 21 頭の個体を採集することができた．同地ではさらにオナガコノマチョウ亜科に属するもの 1 種 1 頭を採集した．この両亜科の蝶は，いずれも南米の熱帯降雨林の林床にすむもっとも代表的なものである．

スカシジャノメ類は，林床の地表すれすれの低いところを活発に飛びまわり，ときどき地表や下生えの葉上に翅を半ば開いた状態で静止するが，感覚は鋭敏で，人の気配を感じるとすぐ飛びたち，下生えの内部をくぐるようにして飛び去る習性がある．*Cithaerias* や *Haetera* に属するものは，翅の大部分が透明で，うす暗い熱帯降雨林の内部では，後翅の赤色斑や黄色斑のみがよく目立つ．食草は未知であるが，おそらくイネ科の草本ではなく，ヤシ科そのほかの林床性の単子葉植物ではないかと思われる．

このリストに含まれる 13 種の中でもっとも注目されるものは，*Pierella hortona* Hewitson である．この種は属 *Pierella* の中でも比較的まれな種であり，エクアドルのアマゾン地域から原名亜種 *hortona* Hewitson が，ブラジル北西部のネグロ川 Río Negro 流域から亜種 *hortansia* C. et. R. Felder が知られている．このリストの中に含まれているものは，筆者がサンホセで採集した 1♂1♀ と，リヒター博士がコトゥエ川で採集された 1♂ であるが，これらは原名亜種 *hortona* に比べて，雌雄ともに前翅中室端の青紫色斑が小さく，またその外縁部が直線的になり，その青紫色斑は原名亜種のように楕円形にならずに半月形となる．また，後翅の青紫色斑の位置は，亜種 *hortensia* のように内側にずれることがなく，原名亜種と大差がない．おそらくコロンビア南部に分布する新亜種に相当するものと思われるが，材料が十分でなく，変異の傾向も明らかでないので，ここでは新亜種としての記載を保留する．

Resumen

Se publica una lista de los Haeterinae y Biinae (Lepidóptera: Satyridae), coleccionados principalmente en Colombia por las expediciones, "The First Scientific Expedition of Shizuoka University to the Colombian Andes 1967" y "La Expedición Japonesa a las Zonas Amazónicas 1973". Además, la lista contiene los datos de unas especies coleccionadas por el Dr. Leopoldo Richter (Bogotá).

En este reporte, se incluyen 11 especies de los Haeteriinae y 2 especies de los Biinae. Además, se nota la variación geográfica de coloración de las alas de *Pierella hortona* Hewitson, la cual fue coleccionada en las selvas de San José (Intendencia del Caquetá) y del Río Cotuhé (Comisaría del Amazonas), en la parte del sur de Colombia.

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